

MIDDLE BRIDGE AMERICAN SYCAMORE  
(Middle Bridge *Platanus occidentalis*)  
NPS Witness Tree Protection Program  
Antietam National Battlefield  
Near former site of the historic middle bridge  
U.S. Route 34  
Sharpsburg  
Washington County  
Maryland

HALS MD-9  
MD-9

#### PHOTOGRAPHS

#### WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN LANDSCAPES SURVEY  
National Park Service  
U.S. Department of the Interior  
1849 C Street NW  
Washington, DC 20240-0001

**HISTORIC AMERICAN LANDSCAPES SURVEY****MIDDLE BRIDGE AMERICAN SYCAMORE****(Middle Bridge *Platanus occidentalis*)****HALS No. MD-9**

<u>Location:</u>	Antietam National Battlefield, near former site of the historic middle bridge, U.S. Route 34, Sharpsburg vicinity, Washington County, Maryland
<u>Owner/Manager:</u>	U.S. Government, National Park Service
<u>Present Use:</u>	Fell in June 2006, removed shortly thereafter
<u>Significance:</u>	The Middle Bridge American Sycamore ( <i>Platanus occidentalis</i> ) is significant for its historical association with Union Gen. George B. McClellan's indecision at the Battle of Antietam.
<u>Author &amp; Discipline:</u>	Jonathan Pliska, Landscape Architectural Historian, 2007
<u>Project Information:</u>	The Witness Tree Protection Program was a pilot project undertaken by the Historic American Landscapes Survey and the National Capital Region of the National Park Service. The principals involved were Richard O'Connor, Chief, Heritage Documentation Programs; Paul D. Dolinsky, Chief, Historic American Landscapes Survey; Darwina Neal, Chief, Cultural Resources, National Capital Region; Jonathan Pliska, Historian, Historic American Landscapes Survey; Jet Lowe and James Rosenthal, Photographers, Heritage Documentation Programs.

**PART I. HISTORICAL INFORMATION**

Early in the morning of 15 September 1862, Confederate divisions under the command of Maj. Gen. James Longstreet arrived at Antietam Creek en route to the town of Sharpsburg, Maryland, where Gen. Robert E. Lee planned to mass the Army of Northern Virginia in anticipation of a decisive battle with Union Maj. Gen. George B. McClellan's Army of the Potomac. Longstreet and his soldiers crossed the creek via the Boonsboro Bridge, so-named because it lay along the turnpike running east to the town of Boonsboro, Maryland. This bridge was one of three stone arch bridges spanning Antietam Creek near Sharpsburg, and as it was situated in-between the other two, has come to be known as the middle bridge. A pair of large American sycamores was planted nearby. Two days after Longstreet passed them, these trees stood witness to a monumental error in judgment that, if averted, would likely have led to the total defeat of

the Confederate Army and a swift end to the war. Instead, the Civil War continued on for two and a half more years, resulting in 600,000 dead.

Union troops began arriving on the eastern side of Antietam Creek during the afternoon of 15 September. Among the first were Brig. Gen. George Sykes' 2nd (Regular) Division, Fifth Army Corps, who engaged Longstreet's rear guard and secured the middle bridge and Boonsboro Pike.<sup>1</sup> Throughout the following day, McClellan organized the Army of the Potomac into three principal contingents, one grouped at each of the bridges: Maj. Gen. Joseph "Fighting Joe" Hooker in command of the forces to the north, those of Maj. Gen. Ambrose Burnside to the south, and reserve troops under Sykes and Maj. Gen. John Fitz Porter massed near the middle bridge. McClellan's overall battle strategy was simple and straightforward. Hooker would lead the principal assault from the north while Burnside launched a simultaneous attack over the lower bridge. Then, as McClellan later wrote, when "one or both of the flank movements were fully successful" he would attack the Confederate center "with any reserve I might then have on hand."<sup>2</sup> This last attack was to have begun by crossing the middle bridge and was designed to cut Lee's army in two. All three contingents would then converge on Sharpsburg.

During the evening of 16 September, Hooker crossed the Antietam and skirmished with Confederate defenders under the command of Brig. Gen. John Bell Hood. As it was out of range of his artillery, Lee had never planned to contest the upper bridge, but this early clash gave away McClellan's intentions. Lee responded by shifting troops north to his left flank, soldiers who were originally stationed toward the center of the Confederate line. As a result, Hooker met with a much improved defense when he attacked in full at dawn on the 17th. The Union attack stalled and heavy fighting in the east and west woods, the Miller cornfield, and the vicinity of the Dunker Church led to some 13,000 total casualties by morning's end.<sup>3</sup> Meanwhile, Burnside's attack on the lower bridge had been delayed and he did not move against it until 10:00 a.m., some five hours behind the original schedule. When he did attack, the entrenched Confederates repelled several charges by concentrating fire on the narrow bridge opening on the creek's eastern bank, allowing a small group of 400 defenders to keep Burnside's 12,500 troops at bay until 1:00 p.m. Low on ammunition, the Confederates withdrew, but this small group, less than 4 percent of Burnside's total strength, had cost him precious time. He did not press on until 3:00 p.m., as his own ammunition shortfall caused further delays and the bridge itself proved a bottleneck for the throngs of soldiers, supply wagons, and artillery

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<sup>1</sup> Tim Reese, "On the Brink: The Confederate Center, Boonsboro Turnpike," in *Antietam on the Web* (online database: Brian Downey and AotW Members, 10 January 2008), [http://aotw.org/exhibit.php?exhibit\\_id=371](http://aotw.org/exhibit.php?exhibit_id=371) (accessed 11 January 2008).

<sup>2</sup> United States War Dept., *The War of the Rebellion: A Compilation of the Official Records of the Union and Confederate Armies*, ser. 1, vol. 19, pt. 1 (Washington, D.C.: Government Printing Office, 1887), 30.

<sup>3</sup> Stephen W. Sears, "Antietam, Maryland (MD005), Washington County, September 17, 1862," in *The Civil War Battlefield Guide*, 2nd ed., ed. Frances H. Kennedy (New York: Houghton Mifflin, 1998), 118-20; Frederick Tilberg, *Antietam: Historical Handbook Number Thirty-One*, rev. ed. (Washington, D.C.: Government Printing Office, 1961), [http://www.nps.gov/history/history/online\\_books/hh/31/index.htm](http://www.nps.gov/history/history/online_books/hh/31/index.htm) (accessed 10 January 2007).

attempting to cross.<sup>4</sup> Burnside was too late to lend any support to the northern assault, which by 1:00 p.m. had sustained a further 3,000 casualties along the infamous sunken road or “Bloody Lane.” Moreover, the timely arrival of 3,000 new Confederates under Maj. Gen. A. P. Hill strengthened the defenses to the south, and routed Burnside’s numerically superior but largely inexperienced troops. Consequently, Burnside pulled back to the lower bridge.<sup>5</sup>

The Union attack had, to say the least, not gone according to plan. Neither Hooker nor Burnside succeeded in breaching the Confederate flanks. Their stalled assaults had, however, forced Lee to divert his troops to the north and south in order to counter these threats. In so doing, Lee left the center of the Confederate line spread dangerously thin, thus creating the opening which McClellan had planned for all along. But he failed to act.

On the morning of the battle, McClellan ordered Brig. Gen. Alfred Pleasonton’s cavalry and horse artillery across the middle bridge to test Lee’s defenses. In the midst of the ensuing artillery duel the Confederates gave ground and retreated, especially after Sykes’ long-range artillery was brought to bear.<sup>6</sup> Approximately 1,500 of Sykes’ regulars also crossed the bridge as infantry support.<sup>7</sup> Around 3:00 p.m. Capt. Hiram Dryer, 4th U.S. Infantry, assumed command of this small task force, pushing on all the way to the edge of town. By 4:30 p.m. only two weakened battalions and a battery remained in defense of the Confederate center. Recognizing the opportunity, Dryer requested that a full-scale assault from the reserves be launched immediately. A runner was dispatched to McClellan who, along with Sykes and Porter, was mounted on horseback along the Boonsboro Pike in the vicinity of the middle bridge. Allegedly, both McClellan and Sykes favored an immediate assault, but Porter purportedly urged against committing the troops, saying, “Remember, General! I command the last reserve of the last Army of the Republic.”<sup>8</sup> McClellan never gave the order, and the chance to rout Lee’s army passed as the sun set on the single bloodiest day in American history.<sup>9</sup> McClellan’s excessive caution and his chronic overestimation of the enemy’s strength had elicited much criticism against him earlier in the war. On 17 September 1862, these factors combined to halt McClellan at the brink of total victory. With nearly 12,000 troops in reserve, he held a 30:1 advantage against the few remaining defenders standing between the middle

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<sup>4</sup> James V. Murfin, *The Gleam of the Bayonets: The Battle of Antietam and Robert E. Lee’s Maryland Campaign, September 1862* (Baton Rouge: Louisiana State University Press, 1965), 270-75.

<sup>5</sup> Sears, “Antietam, Maryland (MD005),” 120.

<sup>6</sup> Reese.

<sup>7</sup> Stephen W. Sears, *Landscape Turned Red: The Battle of Antietam* (New York: Houghton Mifflin, 1983; New York: Mariner Books, 2003), 292.

<sup>8</sup> Porter later denied the incident. See Gen. Jacob D. Cox, “The Battle of Antietam,” in *Battles and Leaders of the Civil War*, vol. 2, *The Struggle Intensifies*, eds. Clarence C. Buel and Robert U. Johnson (1888; reprint, Edison, N.J.: Castle, 1990), 656n; quoted in James M. McPherson, *Battle Cry of Freedom: The Civil War Era*, vol. 4, *The Oxford History of the United States*, ed. C. Van Woodward (New York: Oxford University Press, 1988), 543-44.

<sup>9</sup> The National Park Service estimates that a total of 22,720 Union and Confederate soldiers were either killed, missing, wounded, or captured during the Battle of Antietam. See National Park Service, “Casualties at Antietam,” in *Antietam National Battlefield*, <http://www.nps.gov/archive/anti/home.htm> (accessed 14 January 2007).

bridge and Sharpsburg,<sup>10</sup> yet chose not to commit the force due to concern over a Confederate counteract that was, in reality, all but impossible given the state of Lee's army.<sup>11</sup> Charles C. Coffin, an intrepid reporter from the *Boston Journal* was on hand during the battle, and summarized the prevailing opinion against the general's indecision:

*It was the plain dictate of common sense that then was the time when Porter's eleven thousand should have been sent across the Antietam and thrown like a thunderbolt upon the enemy. It was so plain that the rank and file saw it. 'Now is the time' was the universal comment. But not a soldier stirred from his position. McClellan saw it, but issued no order.*<sup>12</sup>

There, along the Boonsboro Pike and within view of two large American sycamore trees, McClellan considered, faltered, and forfeited a remarkable opportunity to not only carry a decisive battle, but force an end to the war. As Confederate Brig. Gen. E. P. Alexander later recalled, "Lee's army was ruined and the end of the Confederacy was in sight."<sup>13</sup> Instead of pressing his advantage, McClellan stopped the fight, refused to continue the attack the next morning, and, most incredulously, allowed Lee to withdraw back to Virginia. When McClellan refused to pursue the retreating Confederate army, President Abraham Lincoln, having exhausted his patience with the general's slow pace and gratuitous caution, removed him from his command on 5 November 1862.

Following the Battle of Antietam, the historic middle bridge was replaced with a modern bridge to facilitate automobile traffic along the Boonsboro Pike, now U.S. Route 34. Additionally, one of the two witness trees died, but the second remained as a living reminder of McClellan's lost opportunity. In June 2006, this tree, dubbed the Middle Bridge American Sycamore, also died, immediately before the start of this documentation project. Photographs taken by the Historic American Landscapes Survey depict the remains of the tree at this time, after it had fallen and become partially submerged in Antietam Creek.

## PART II. BIOLOGICAL INFORMATION

Commonly known as the American sycamore, or simply sycamore, *Platanus occidentalis* is native to North America with a home range stretching from Maine to Ontario and Minnesota, and south to Florida, Texas, and northeastern Mexico.<sup>14</sup> However, its growing

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<sup>10</sup> According to Reese, approximately 320 soldiers comprised the two remaining Confederate brigades. See also United States War Dept., *The War of the Rebellion: A Compilation of the Official Records of the Union and Confederate Armies*, ser. 1, vol. 19, pt. 1 (Washington, D.C.: Government Printing Office, 1887), 143, 194-904, 939-50.

<sup>11</sup> McPherson, 544.

<sup>12</sup> Cox, 684.

<sup>13</sup> E.P. Alexander, *Military Memoirs of a Confederate: A Critical Narrative*, ed. T. Harry Williams (1907; reprint, Whitefish, Mont.: Kessinger Publishing, LLC, 2007), 262.

<sup>14</sup> This species is also known as the American planetree, buttonwood, and buttonball-tree; O. O. Wells and R. C. Schmidting, "Eastern Cottonwood," in *Silvics of North America: 1. Conifers. Agricultural Handbook 654*, online ed., tech. coords. Russell M. Burns and Barbara H. Honkala (Washington, D.C.: U.S. Dept. of

zone extends across the contiguous forty-eight states, except California. It is one of six or seven large species of trees classified under the family Platanaceae.<sup>15</sup> The bark is the most distinguishing feature of the species. The outer layer is smooth in texture and a dark grayish-brown. It flakes off in large, irregular patches, revealing the grayish or cream-colored inner bark, which becomes whitish following its exposure. Together the different colors of bark create an impressive mottled appearance, especially in the winter after the deciduous leaves have fallen.<sup>16</sup> These leaves vary in length from 4" to 12", are rather star-shaped, and resemble maple leaves. They exhibit pinnate venation, where lateral veins diverge on either side of one large central vein, or midrib. The perimeter is coarsely toothed or serrated, and leaves are arranged singly on alternate sides of the branches. They are medium to dark green in the summer and turn an unremarkable shade of yellowish-brown in the autumn.<sup>17</sup> After reaching physiological maturity in six to seven years, the trees produce red, ½" to 1" diameter ball-shaped flowers. These appear by May in the north and as early as late March in the south. American sycamore is monoecious; male and female flowers appear on the same tree. They remain distinguishable since "the male flowers grow in clusters grow on branchlets of the previous year and the female flower clusters grown on older branchlets."<sup>18</sup> The fruit is similarly rounded, but brown in color and ripens by September or October. They often remain on the tree over winter, with the dry, hard shell breaking up the following spring to release many individual, hairy seeds.<sup>19</sup>

*Platanus occidentalis* grows quickly, at a maximum rate of 3' per year, and is one of the most impressive trees in the United States.<sup>20</sup> Individuals typically grow 75' to 100' tall, with a similar or greater crown spread.<sup>21</sup> The species also boasts the greatest diameter at breast height (d.b.h.) of any temperate hardwood tree, often reaching 10' to 13' (a circumference of approximately 190" to 245").<sup>22</sup> The Middle Bridge *Platanus occidentalis* died in June 2006, falling into Antietam Creek before measurements were obtained. As it was naturally established prior to the Battle of Antietam, the precise age of this American sycamore is unknown. However, given its considerable size in historical photographs, the tree was already reasonably large at the time of the battle, fought 17

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Agriculture, U.S. Forest Service, 1990), 1004,

[http://www.na.fs.fed.us/spfo/pubs/silvics\\_manual/volume\\_2/silvics\\_v2.pdf](http://www.na.fs.fed.us/spfo/pubs/silvics_manual/volume_2/silvics_v2.pdf) (accessed 13 June 2006).

<sup>15</sup> Liberty Hyde Bailey and Ethyl Hyde Bailey, "Platanus," in *Hortus Third: A Concise Dictionary of Plants Cultivated in the United States and Canada*, revised and expanded by the staff of the Liberty Hyde Bailey Hortorium, Cornell University (New York: Macmillan Publishing Co., Inc., 1976), 883.

<sup>16</sup> Michael A. Dirr, *Manual of Woody Landscape Plants: Their Identification, Ornamental Characteristics, Culture, Propagation and Uses*, 5th ed. (Champaign, Ill.: Stipes Publishing L.L.C., 1998), 754.

<sup>17</sup> Ibid; Edward F. Gilman and Dennis G. Watson, *Platanus occidentalis: Sycamore*, (Gainesville, Fla.: University of Florida, Institute of Food and Agricultural Sciences, November 1993), <http://edis.ifas.ufl.edu/ST484> (accessed 12 June 2006).

<sup>18</sup> Wells and Schmidtling, 1008.

<sup>19</sup> Ibid; Gilman and Watson.

<sup>20</sup> Jeffery L. Reimer and Walter Mark, *SelectTree: A Tree Selection Guide* (San Luis Obispo, Calif.: Urban Forest Ecosystems Institute, 2004), California Polytechnic State University, <http://selecttree.calpoly.edu> (accessed 21 June 2006).

<sup>21</sup> Dirr, 755.

<sup>22</sup> Reimer and Mark.

September 1862. At its death in June 2006, the Middle Bridge *Platanus occidentalis* had at least attained the minimum typical species longevity of 150 years.<sup>23</sup>

American sycamores are most compatible with plantings outside of heavily urbanized environments. Although capable of rooting in small cut-out planting pits, highway medians, parking lot islands, and other similarly enclosed spaces, these locations are not recommended due to the large size the species eventually attains. Protruding branches become a major nuisance near homes or business, and aggressive roots often raise and destroy nearby sidewalks. Likewise, lawn plantings are similarly discouraged due to messy habit, as the trees constantly drop leaves, fruits, and twigs. The dense shade created by the trees may interfere with grass growth, and falling leaves reportedly release a substance which may even kill newly planted grass. The species itself is highly sensitive to elevated ozone levels.<sup>24</sup> For the mutual benefit of the trees and the public, individuals should be planted in expansive, open areas where they will be allowed to grow. *Platanus occidentalis* is extremely hearty, highly drought tolerant, and adapts well to a wide variety of soil conditions – alkaline to acidic, sand to clay, and extended flooding to well drained. However, the species is sensitive to diseases and pests. One such disease, anthracnose, does not usually kill a tree, but causes defoliation, branch and twig cankers, and reduced vigor. Conversely, a bacterial leaf scorch can kill a tree in just a few years. As the disease progresses, leaves appear scorched, become crisp, and curl up as they turn reddish-brown. Sycamore lace bugs cause premature defoliation and aphids suck sap from the trees, but neither seriously affect survival.<sup>25</sup>

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<sup>23</sup> Ibid.

<sup>24</sup> Gilman and Watson.

<sup>25</sup> Ibid.